

Amendments to the Specification

Please add the following new paragraph after the title at page 1, line 6:

--Government Rights Statement

This invention was made with government support under a grant from the National Institute of Standards and Technology. Therefore, the U.S. Government may have certain rights in this invention.--

Please replace the paragraph beginning at page 1, line 17, with the following rewritten paragraph:

-- The field of transgenics was initially developed to understand the action of a single gene in the context of the whole animal and the phenomena of gene activation, expression, and interaction. This technology has also been used to produce models for various diseases in humans and other animals and is amongst the most powerful tools available for the study of genetics, and the understanding of genetic mechanisms and function. From an economic perspective, the use of transgenic technology to convert animals into "protein factories" for the production of specific proteins or other substances of pharmaceutical interest (Gordon et al., 1987, ~~Biotechnology~~ Biotechnology 5: 1183-1187; Wilmut et al., 1990, Theriogenology 33: 113-123) offers significant advantages over more conventional methods of protein production by gene expression.--

Please replace the paragraph beginning at page 9, line 22, with the following rewritten paragraph:

--The terms "polynucleotide," "oligonucleotide," and "nucleic acid sequence" are used interchangeably herein and include, but are not limited to, coding sequences (polynucleotide(s) or nucleic acid sequence(s) which are transcribed and translated into polypeptide *in vitro* or *in vivo* when placed under the control of appropriate regulatory or control sequences); control sequences (e.g., translational start and stop codons, promoter sequences, ribosome binding sites, polyadenylation signals, transcription factor binding sites, transcription termination sequences,

upstream and downstream regulatory domains, enhancers, silencers, and the like); and regulatory sequences (DNA sequences to which a transcription factor(s) binds and alters the activity of a gene's promoter either positively (induction) or negatively (repression)). No limitation as to length or to synthetic origin ~~are~~ is suggested by the terms described herein.--

Please replace the paragraph beginning at page 22, line 17, with the following rewritten paragraph:

--One aspect of the present invention, therefore, provides a novel isolated nucleic acid that comprises the nucleotide sequence SEQ ID NO: 26, shown in Fig. 4 (GenBank Accession No. AF 453747), and derivatives and variants thereof located immediately 5' upstream of the transcription start site of the chicken ovomucoid gene locus.--

Please replace the paragraph beginning at page 32, line 1, with the following rewritten paragraph:

--It is contemplated that the transfected cell according to the present invention may be transiently transfected, whereby the transfected recombinant DNA or expression vector may not be integrated into the genomic nucleic acid. It is further contemplated that the transfected recombinant DNA or expression vector may be stably integrated into the genomic DNA of the recipient cell, thereby replicating with the cell so that each daughter cell receives a copy of the transfected nucleic acid. It is still further contemplated that the scope of the present invention ~~encompass~~ encompasses a transgenic animal producing a heterologous protein expressed from a transfected nucleic acid according to the present invention.--

Please replace the paragraph beginning at page 42, line 3, with the following rewritten paragraph:

--The oviduct of a Japanese quail (*Coturnix coturnix japonica*) will be removed and the magnum portion minced and enzymatically dissociated with 0.8 mg/ml collagenase (Sigma Chemical Co., St. Louis, MO) and 1.0 mg/ml dispase (Roche Molecular Biochemicals, Indianapolis, IN) by shaking and ~~titrating~~ tritulating for 30 minutes at 37°C. The cell

suspension will then be filtered through sterile surgical gauze, washed three times with F-12 medium (Life Technologies, Grand Island, NY) by centrifugation at 200 x g, and resuspended in OPTIMEM™ (Life Technologies) such that the OD₆₀₀ will be approximately 2. 300 µl of the cell suspension will be plated in each of a 24-well dish. For each transfection, 2.5 µl of DMRIE-C liposomes (Life Technologies) and 1 µg of DNA, comprising the ovomucoid promoter region (SEQ ID NO: 26) and a chicken optimized human interferon α-2b encoding sequence (as disclosed in U.S. Patent Application Serial No: 09/173,864, incorporated herein by reference in its entirety, will be preincubated for 15 minutes at room temperature in 100 µl of OPTIMEM™, and then added to the oviduct cells. Cells with DNA/liposomes will be incubated for about 5 hours at 37°C in 5% CO₂. Next, 0.75 ml of DMEM (Life Technologies), supplemented with 15% fetal bovine serum (FBS) (Atlanta Biologicals, Atlanta, GA), 2X penicillin/streptomycin (Life Technologies), 10⁻⁶ M insulin (Sigma), 10⁻⁸ M α-estradiol (Sigma), and 10⁻⁷ M corticosterone (Sigma) will be added to each well, and incubation was continued for 72 hours. Medium will then be harvested and centrifuged at 110 x g for 5 minutes. The supernatant will be analyzed by ELISA for human interferon α2b content.--